



California Regional Water Quality Control Board

Lahontan Region

Internet Address: <http://www.mscomm.com/~rwqcb6>



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FACT SHEET (2/1/99)

UNDERGROUND STORAGE TANK (UST) PROGRAM

SITE CLOSURE PROCESS

Introduction

The purpose of this Fact Sheet is to describe the site closure process used by the Regional Board for UST cases. Other portions of the region's UST Program are described in Fact Sheets accessible from the Internet site listed above or obtained by request from either office. Responsible Parties need to know early in the site investigation process what information is necessary to support a closure request.

Site Closure

If a responsible party (RP) believes an UST case is ready for closure, a **Closure Request Report** should be submitted, including a completed **Case Closure Summary Form (enclosed)**. The report is to summarize site history, site geology and hydrogeology, chemical data over time, potential receptors, beneficial uses, existing conditions, and include rationale supporting site closure. The rationale must include a finding about future impacts on water quality and human health. If it is determined that ground water has not been impacted, evidence supporting this condition must be provided.

The Case Closure Summary is to be completed and submitted along with the Closure Request Report by the RP or their designee.

Closure Request Report

The purpose for a Closure Request Report is two fold: 1) provide a document upon which the regulatory agency may make an informed and objective decision regarding the requested closure and, 2) provide the RP with the site closure parameters which will be reviewed by the regulatory agency.

CLOSURE DOCUMENTATION

The minimum information requested in the Closure Request Report is listed below.

1. Identify and state distance to lakes, streams, irrigation ditches, wetlands and/or production wells for municipal, domestic, agriculture, industry and other uses within one mile (5280') of the site.
2. Site maps and cross sections, to scale, of impacted areas, locations of former and existing tank systems, elevation contours, gradients, and nearby surface waters, buildings, streets, and subsurface utilities.
3. Maximum and minimum ground water levels (below ground surface), including vertical separation distance from contamination.
4. Tabulated results of all sampling and analyses, including indication of sampling method and detection limits.
5. Vertical and lateral concentration contours on scaled maps and cross sections of contaminants found initially, and those remaining in soil and ground water, both on and off site.
6. Mass balance calculation of the substance treated versus that remaining.
7. Any and all remedial technologies used to clean the site, the duration of implementation, and the location of any disposed material.
8. Zone of influence calculated for the subsurface remediation system and the zone of capture attained for the soil and ground water remediation system.
9. Reasons why "Background" conditions were/are unattainable for soil and ground water (if applicable) and address the criteria outlined in State Board Resolution 92-49 and Title 23, Cal. Code of Regulations § 2550.4(d). This information may be termed a "water quality degradation analysis". Economic and technical evaluations are

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- made along with an evaluation of the estimated cleanup time until water quality objectives are restored. Refer to State Board Order WQ 98-04 UST.
10. Rationale why conditions remaining at the site will not adversely impact water quality, human health, or other beneficial uses.
 11. A list of all technical report submittals and letters used for characterization, remediation, and post remediation.
 12. Information to assess fuel oxygenates, specifically methyl tertiary butyl ether (MTBE) as required in Health and Safety Code § 25299.37.1.
 13. Information regarding all fee title holders of the property as required in Health and Safety Code § 25297.15 & 25299.37.

Case Closure Summary Form

In order to expedite the Board staff review of case closure requests, a completed **Case Closure Summary Form** should accompany the request. The form may be downloaded from the Board's Internet address or obtained from either Regional Board office. Board staff recommend that local regulatory agencies use this form, or a similar form, to document site conditions at closure.

Local Oversight Program (LOP) Agency Closure Notification

LOP agencies, under contract with the State Water Resources Control Board (State Board), must provide the Regional Board with notification regarding UST cases (both soil and groundwater) identified for closure. Kern and San Bernardino counties are LOP agencies in the Lahontan Region. Typically, the LOP agency submits to the Regional Board a **Case Closure Summary Form** with a 30 day response time. The LOP contract (between the State Board and LOP agency) indicates that the State Board will mediate disagreements between the LOP agency and Regional Board regarding case closure. Board staff review the LOP Closure Concurrence request and concur if appropriate. In cases of disagreement, attempts are made to resolve differences informally with the LOP within the 30-day time frame before issuing a formal non-concurrence.

Case Closure Letters

All regulatory agencies, including the Regional Board, are required to issue a standard Case Closure letter when closure is appropriate. That letter is described in Section 25299.37 of the Health and Safety Code. For consistency, all Case Closure letters issued by the Regional Board from both

offices are signed by the Assistant Executive Officer. Copies of all case closure letters (Local Agency Lead or Regional Board Lead) are sent to all title fee holders of the property, other interested parties, the Regional Board's Leaking Underground Storage Tank Information System (LUSTIS) Administrator, and the State Board UST program.

Closure Notification

Board staff publish a short narrative summary of closed UST cases in the Executive Officer's Report which is sent to Regional Board members, included in the Regional Board meeting agenda package, and put on the Board's Internet page. This notification meets the public participation requirements of Section 2728, Chapter 16, Title 23, CCR. All fee title holders of the affected property must have been notified of intended corrective actions or proposed site closure according to AB 681.

Case Closure Denial

Board staff will notify responsible parties in writing of cases where Case Closure was requested and is denied and provide the rationale for denial. Responsible parties are allowed to appeal for case closure directly to the State Board under SB 562. The State Board Cleanup Fund has published guidance on this process. Board staff may schedule cases to be heard by the Regional Board prior to consideration by the State Board.

Local Implementing Agencies (LIAs)

LIAs are not required to seek concurrence from the Regional Board for closing local agency lead cases. However, LIAs are encouraged to work with Board Staff as needed to evaluate case closure criteria. The case closure criteria used by LIAs must be consistent with the Lahontan Regional Board's Basin Plan.

ENCLOSURE: Case Closure Summary Form VVL/Y/UST/FACTSHT/ustclsr.doc



Case Closure Summary (revised 2/1/99)

I. Regional Board Contact

Agency Name/Phone: California Regional Water Quality Control Board, Lahontan Region	
Address:	
Responsible Staff:	Phone:

II. Case Information

Site Facility Name:			
Site Facility Address:			
LUSTIS Case No.:	Local Agency No.:	Cleanup Fund No.:	
Unauthorized Release Form Date:			
Responsible Party:	Name:	Address:	Phone Number
Property Owner(s)			
Operator(s)			
Were all Landowners listed on the Fee Title informed of remedial and closure decisions?			

III. Release and Site Characterization Information

Cause of Release:	Chemical Type Released:	
Tank Size:	Tank Contents	Date Removed/Replaced/Upgraded

IV(a). Maximum Soil Contaminant Concentrations

Contaminant	Method	Before (mg/kg)	After (mg/kg)	Contaminant	Method	Before (mg/kg)	After (mg/kg)
TPHg				Benzene			
TPHd				Toluene			
Other Fuel				Ethylbenzene			
Heavy Metals				Xylene			
MTBE				Other--			
Soil Type At The Site:							
Soil Remediation Method(s):							
Duration of Remediation:							



Volume Treated/Removed:	Disposal Location:
Maximum Depth of Remaining Petroleum Hydrocarbon Affected Soil:	
Depth of Maximum Concentration of Petroleum Hydrocarbons Remaining in Soil:	

IV(b). Maximum Ground Water Contaminant Concentrations

Contaminant	Method	Before (µg/l)	After (µg/l)	Contaminant	Method	Before (µg/l)	After (µg/l)
TPHg				Benzene			
TPHd				Toluene			
Other Fuel				Ethylbenzene			
Heavy Metals				Xylene			
MTBE				Other ¹ --			
Min Depth To Ground Water:				Ground Water Flow Direction:			
Max Depth To Ground Water:							
Number and Type of Monitoring Wells Installed:							
Number of Monitoring Wells not Decommissioned at time of Closure:							
Were (Domestic, Municipal, Ag, etc.) Supply Wells Affected?							
Location of closest municipal well:							
Depth of aquifer currently used:							
Use of Aquifer:							
Ground Water Remediation Method(s):							
Volume Treated/Removed:				Duration of Remediation:			
Number of Consecutive Sampling Events Reporting Concentrations Less than Water Quality Protection Standards?							
Sampling Frequency							
Comments:							

IV(c). Surface Water Impacts

Was Surface Water Affected?	Name of Water Body Affected:
Comments:	

IV(d). Maximum Extent of Any Remaining Contamination



Environment	Lateral (ft)	Vertical (ft)	Contaminant
Soil			
Ground Water			

V. Free Product

Was Free Product Encountered?	Has Free Product Been Adequately Recovered?
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VI. Human Health and Ecological Risk Evaluation

Was Quantitative or Qualitative Risk Evaluation Performed? (briefly describe below)	If Land Use changes should risk be re-evaluated? (briefly describe below)
Has vapor migration pathway to living receptors been evaluated?	

VI. Remediation Summary and Closure Rationale

Remediation Summary: *Include a narrative description of about one to three paragraphs of the cleanup.*

Closure Rationale: *Justification that closure is Protective of Human Health and the Environment, water Beneficial Uses, and in Compliance with the Lahontan Basin Plan and that contaminants remaining in soil above background do not pose a threat to water quality. Refer to State Board Resolution 92-49 for a list of factors to consider when degraded groundwater remains at the time of closure.*

(Please Include an Expanded Description for the above or Attach)

List of Acronyms

TPH - total petroleum hydrocarbons	ND - non-detectable
TPHg - total petroleum hydrocarbons as gasoline	NA - not applicable
TPHd - total petroleum hydrocarbons as diesel	NS - not sampled
CRWQCB - California Regional Water Quality Control Board	MTBE - methyl-tert-butyl ether
LUSTIS - Leaking Underground Storage Tank Information System	fbg - feet below grade

End Notes

- ¹ Other fuel additives should be analyzed and reported such as
oxygenate ethers; tertiary amyl methyl ether (TAME), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE)
oxygenate alcohols; tertiary butyl alcohol (TBA)
lead scavengers: ethylene dibromide (EDB)

